

CLAIMS

What is claimed is:

1. A photography system, comprising:
 - a) a remote control that casts a light spot on a photographic subject; and
 - b) a digital camera having a field of view, which digital camera can detect in its field of view the position of the light spot, and which digital camera selects a region from its field of view to photograph based on the detected position of the light spot.
2. The photography system of claim 1 wherein the digital camera centers the selected region on the detected position of the light spot.
3. The photography system of claim 1 wherein the selected region is of a predetermined size, and wherein the digital camera positions the selected region as nearly as possible to centered on the detected position of the light spot while keeping the selected region within the camera's field of view.
4. The photography system of claim 1 wherein digital camera:
 - a) selects the largest region that will fit within its field of view when the selected region is centered on the detected position of the light spot, and
 - b) centers the selected region on the detected position of the light spot.
5. The photography system of claim 1 wherein minimum and maximum sizes of the selected region are predetermined, and wherein the digital camera
 - a) selects a region that is the smaller of the predetermined maximum region size and the largest size that will fit within the camera's field of view and can be centered on the detected position of the light spot when such a region can be

- 6 selected that is larger than the predetermined minimum region size, and
 otherwise
- 8 b) selects a region that is of the predetermined minimum region size and
 positions the region as nearly as possible to centered on the detected position
10 of the light spot while keeping the region within the camera's field of view.
6. The photography system of claim 1 wherein the remote control casts the light spot
2 on the photographic subject using a laser.
7. The photography system of claim 1 wherein the light spot is cast on the
2 photographic subject intermittently.
8. The photography system of claim 7 wherein the digital camera detects the position
2 of the light spot by detecting a change in state of the light spot between successive
 digital images.
9. The photography system of claim 1 wherein the light spot is absent during the
2 taking of a final photograph.
10. The photography system of claim 1 wherein the digital camera preferentially
2 focuses on subjects in the vicinity of the light spot.
11. The photography system of claim 1 wherein the light spot is used to signal the
2 digital camera to perform at least one other function in addition to selecting a
 region to photograph.
12. The photography system of claim 11 wherein the light spot is used to signal the
2 camera to take a final photograph.

13. The photography system of claim 12 wherein an identifiable flashing pattern of
2 the light spot is used to signal the camera to take a final photograph.
14. The photography system of claim 1 wherein the digital camera is capable of
2 making video recordings.
15. The photography system of claim 14 wherein the digital camera re-selects the
2 region to photograph as the light spot moves during recording.
16. The photography system of claim 14 wherein the light spot is cast on the
2 photographic subject intermittently, and wherein the digital camera removes the
effect of the light spot from video frames in which the light spot appears.
17. The photography system of claim 16 wherein the effect of the light spot is
2 removed using pixel information from other video frames in which the light spot
does not appear.
18. The photography system of claim 14 wherein the selected region is of a
2 predetermined size, and wherein the digital camera positions the selected region as
nearly as possible to centered on the position of the light spot, while keeping the
4 region within the camera's field of view.
19. The photography system of claim 1 wherein the digital camera selects a region
2 that encompasses a recorded set of light spot positions.
20. The photography system of claim 1 wherein the size of the selected region is
2 affected by motions of the light spot.

21. The photography system of claim 1 wherein the position of the selected region is
2 affected by motions of the light spot.
22. The photography system of claim 1 wherein the digital camera comprises an
2 optical zoom function, and wherein the digital camera improves a resolution of the
selected region using the optical zoom function.
23. A method of photography, comprising the steps of:
- 2 a) detecting, in a field of view of a digital camera, a position of a light spot cast
on a photographic subject by a remote control; and
- 4 b) automatically selecting, based on the position of the light spot, a region from
the camera's field of view to photograph.
24. The method of claim 23 wherein selecting a region from the camera's field of
2 view comprises centering the region on the detected position of the light spot.
25. The method of claim 23 wherein the region is of a predetermined size, and
2 selecting a region from the camera's field of view comprises positioning the
selected region as nearly as possible to centered on the detected position of the
4 light spot, while keeping the selected region within the camera's field of view.
26. The method of claim 23 wherein selecting a region from the camera's field of
2 view comprises:
- a) selecting the largest region that can be centered on the detected position of the
4 light spot while fitting within the camera's field of view; and
- b) centering the region on the detected position of the light spot.

27. The method of claim 23 wherein maximum and minimum sizes of the selected
2 region are predetermined, and wherein selecting a region from the camera's field
of view comprises:
4 a) selecting a region to photograph that is the smaller of the predetermined
maximum size region and the largest region that can be centered, while
6 remaining within the camera's field of view, on the detected location of the
light spot when such a region can be selected that is larger than the
8 predetermined minimum region size, and centering the selected region on the
detected location of the light spot; and otherwise
10 b) selecting a region to photograph that is of the predetermined minimum region
size and is positioned as nearly as possible to centered on the detected location
12 of the light spot and is entirely within the camera's field of view.

28. The method of claim 23 wherein the light spot is cast on the photographic subject
2 using a laser.

29. The method of claim 23 wherein detecting the position of the light spot further
2 comprises:
a) casting the light spot on the photographic subject intermittently; and
4 b) detecting changes in the state of the light spot by comparing successive digital
images taken by the digital camera.

30. The method of claim 23, further comprising controlling at least one camera
2 function, in addition to selecting a region to photograph, in response to the light
spot.

- 2 31. The method of claim 30, further comprising signaling, using the light spot, the camera to take a final photograph.
- 2 32. The method of claim 31, wherein signaling, using the light spot, the camera to take a final photograph, comprises flashing the light spot in a recognizable pattern.
- 2 33. The method of claim 23, further comprising:
- 2 c) casting the light spot on the photographic subject intermittently;
- d) making a video recording; and
- 4 e) removing the effect of the light spot from a video frame in which the light spot appears.
- 2 34. The method of claim 33 wherein removing the effect of the light from a video frame in which the light spot appears further comprises copying pixel information from another video frame.
- 2 35. The method of claim 33 wherein the light spot changes states with a frequency of approximately half the frequency with which the digital camera captures video frames during video recording.
- 2 36. The method of claim 23, further comprising making a video recording of the selected region.
- 2 37. The method of claim 36, further comprising repositioning the selected region when the light spot moves within the field of view of the digital camera.
- 2 38. The method of claim 23, further comprising preferentially focusing on subjects in the vicinity of the light spot.

39. The method of claim 23, further comprising encompassing a recorded set of light
2 spot positions with the selected region.
40. The method of claim 23, further comprising determining the size of the selected
2 region based on motions of the light spot.
41. The method of claim 23, further comprising determining the location of the
2 selected region based on motions of the light spot.
42. The method of claim 23, further comprising improving a resolution of the selected
2 region using an optical zoom capability of the digital camera.
43. A photography system, comprising:
- 2 a) means for detecting, in a field of view of a digital camera, the position of a
light spot cast on a photographic subject using a remote control; and
- 4 b) means for digitally framing a photograph based on the detected position of the
light spot.